

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Express Mail No. EV192308212US

McGraw-Hill
Dictionary of
Scientific and
Technical
Terms
Fifth Edition

On the c v r: Ph tomicrograph f crystals f vitamin B.
(Dennis Kunkel, University of Hawaii)

Included in this Dictionary are definitions which have been published previously in the following works: P. B. Jordain, *Condensed Computer Encyclopedia*, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. J. Markus, *Electronics and Nucleonics Dictionary*, 4th ed., Copyright © 1960, 1966, 1978 by McGraw-Hill, Inc. All rights reserved. J. Quick, *Artists' and Illustrators' Encyclopedia*, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. *Blakiston's Gould Medical Dictionary*, 3d ed., Copyright © 1956, 1972 by McGraw-Hill, Inc. All rights reserved. T. Baumeister and L. S. Marks, eds., *Standard Handbook for Mechanical Engineers*, 7th ed., Copyright © 1958, 1967 by McGraw-Hill, Inc. All rights reserved.

In addition, material has been drawn from the following references: R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *U.S. Air Force Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, 1st ed., National Aeronautics and Space Administration, 1965; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology, White Sands Missile Range, New Mexico*, National Bureau of Standards, AD 467-424; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, 1st ed., Department of Defense, 1967; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; *ADP Glossary*, Department of the Navy, NAVSO P-3097.

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Fifth Edition

Copyright © 1994, 1989, 1984, 1978, 1976, 1974 by McGraw-Hill, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

1 2 3 4 5 6 7 8 9 0 DOW/DOW 9 9 8 7 6 5 4 3

ISBN 0-07-042333-4

Library of Congress Cataloging-in-Publication Data

McGraw-Hill dictionary of scientific and technical terms /

Sybil P. Parker, editor in chief.—5th ed.

p. cm.

ISBN 0-07-042333-4

1. Science—Dictionaries. 2. Technology—Dictionaries.

I. Parker, Sybil P.

Q123.M34 1993

503—dc20

93-34772

CIP

INTERNATIONAL EDITION

Copyright © 1994. Exclusive rights by McGraw-Hill, Inc. for manufacture and export. This book cannot be re-exported from the country to which it is consigned by McGraw-Hill. The International Edition is not available in North America.

When ordering this title, use ISBN 0-07-113584-7.

extrinsic sol

semiconductor crystal, in contrast to an intrinsic semiconductor, whose properties are characteristic of an ideal pure crystal. { ek'strinz'ik 'sem-i-kən,də'k-tər }

extrinsic sol [PHYS CHEM] A colloid whose stability is attributed to electric charge on the surface of the colloidal particles. { ek'strinz'ik 'säl }

extrinsic variable star [ASTRON] A variable star, such as an eclipsing variable, whose variation in apparent brightness is due to some external cause, rather than to actual variation in the amount of radiation emitted. { ek'strinz'ik ,verē'ə-bəl 'stär }

extrophy [MED] Malformation of an organ. { 'ek-strə'fē }

extorse [BIOL] Directed outward or away from the axis of growth. { ek'strōrs }

extroversion [BIOL] A turning outward. [PSYCH] The turning to things and persons outside oneself rather than to one's own thoughts and feelings. { 'ek-strə'vər-zhən }

extrudate [ENG] Ductile metal, plastic, or other semisolid material that has been shaped into a continuous form (such as fiber, film, pipe, or wire coating) by forcing the semisolid material through a die opening of appropriate shape. { 'ek-strə,dāt }

extruder [ENG] A device that forces ductile or semisolid solids through die openings of appropriate shape to produce a continuous film, strip, or tubing. { ed'strüd-ər }

extrusion [ENG] A process in which a hot or cold semisolid material, such as metal or plastic, is forced through the orifice of a die to produce a continuously formed piece in the shape of the desired product. [GEOL] Emission of magma or magmatic materials at the surface of the earth. [TEXT] A process for making continuous-filament synthetic fibers by forcing a syruplike liquid through minute holes of a spinneret. { ek'strü-zhən }

extrusion billet [MET] A slug of heated metal that is forced through a die by a hydraulic ram in direct extrusion operations. { ek'strü-zhən ,bil-ət }

extrusion coating [ENG] A process of placing resin on a substrate by extruding a thin film of molten resin and pressing it onto or into the substrates, or both, without the use of adhesives. { ek'strü-zhən ,kōd-īng }

extrusion cooking [FOOD ENG] The process by which moistened, expansible materials are plasticized in a tube by combination of moisture, heat, pressure, and mechanical shear. { ek'strü-zhən ,kük-īng }

extrusion defect [MET] Impaired flow of an extrusion product due to surface oxidation of the ingot or billet. { ek'strü-zhən di,fekt }

extrusion ingot [MET] A cylindrical casting used to form extruded products. { ek'strü-zhən ,īng-gət }

extrusion metal [MET] Any of numerous nonferrous metals, alloys, and other materials used in extrusion operations. { ek'strü-zhən ,med-əl }

extrusion pressing See cold extrusion. { ek'strü-zhən ,pres-īng }

extrusive rock See volcanic rock. { ik'strü-siv 'rāk }

exudate [MED] 1. A proteinaceous material that passes through blood vessel walls into the surrounding tissue in inflammation or a superficial lesion. 2. Any substance that is exuded. { ek'syü,dāt }

exudation See sweating. { ek'syā'dā-shən }

exudation vein See segregated vein. { ek'syā'dā-shən ,vān }

exumbrella [INV ZOO] The outer, convex surface of the umbrella of jellyfishes. { ek'səm'brel-ə }

eye [FOOD ENG] A hole formed in certain cheeses during ripening, such as in swiss cheese. [ZOO] A photoreceptive sense organ that is capable of forming an image in vertebrates and in some invertebrates such as the squids and crayfishes. { ī }

eye assay [MIN ENG] An estimate of the valuable mineral content of a core or ore sample as based on visual inspection. Also known as eyeball assay. { 'ī 'as,ā }

eyeball [ANAT] The globe of the eye. { 'ī,bōl }

eyeball assay See eye assay. { 'ī,bōl 'as,ā }

eyeball potential [PHYSIO] Very small electrical potentials at the eyeball surface resulting from depolarization of muscles controlling eye position. { 'ī,bōl pə'ten-chəl }

eyebars [DES ENG] A metal bar having a hole or eye through each enlarged end. { 'ī,bär }

eyebolt [DES ENG] A bolt with a loop at one end. { 'ī,bōlt }

eye coal [GEOL] Coal characterized by small, circular or elliptical structural disks that reflect light and are arranged in parallel planes either in or normal to the bedding. Also known as augen kohle; circular coal. { 'ī,kōl }

eye-ear plane [ANTHRO] In craniometric study, a position for placing a human skull so that the lower margins of the orbits and the upper margin of the auditory meatus are on the same horizontal plane. Also known as Frankfurt horizontal. { 'ī,ēr ,plān }

eyeglasses [OPTICS] Optical devices containing corrective lenses for defects of vision or for special purposes. { 'ī,glas-əs }

eye lens [OPTICS] The lens in a two-lens eyepiece which is nearer to the eye. { 'ī,lēnz }

eyelet [DES ENG] A small ring or barrel-shaped piece of metal inserted into a hole for reinforcement. { 'ī,lēt }

eyeletting [ENG] Forming a lip around the rim of a hole. { 'ī,ləd-īng }

eyelid [ANAT] A movable, protective section of skin that covers and uncovers the eyeball of many terrestrial animals. { 'ī,lid }

eyelights [GRAPHICS] Low-intensity light sources used to add sparkle to the eyes or teeth and reduce shadows on the face; usually placed at eye level. { 'ī,līts }

eye of the storm [METEOROL] The center of a tropical cyclone, marked by relatively light winds, confused seas, rising temperature, lowered relative humidity, and often by clear skies. { 'ī əv θə 'stōrm }

eye of the wind [METEOROL] The point or direction from which the wind is blowing. { 'ī əv θə 'wind }

eyepiece [OPTICS] A lens or optical system which offers to the eye the image originating from another system (the objective) at a suitable viewing distance. Also known as ocular. { 'ī,pēs }

eyepoint [OPTICS] That point on the axis of a lens at which the brightest and sharpest visual image is obtained. { 'ī,pōint }

eye scanning [IND ENG] Scanning of the visual field by moving the eyeballs without rotation of the head. { 'ī ,skan-īng }

eye screw [DES ENG] A screw with an open loop head. { 'ī ,skrū }

eye socket See orbit. { 'ī ,sāk-ət }

eyespot [BOT] 1. A small photosensitive pigment body in certain unicellular algae. 2. A dark area around the hilum of certain seeds, as some beans. [INV ZOO] A simple organ of vision in many invertebrates consisting of pigmented cells overlying a sensory termination. [PL PATH] A fungus disease of sugarcane and certain other grasses which is caused by *Helminthosporium sacchari* and characterized by yellowish oval lesions on the stems and leaves. { 'ī ,spāt }

eyestalk [INV ZOO] A movable peduncle bearing a terminal eye in decapod crustaceans. { 'ī ,stōk }

eye wall [METEOROL] A zone at the periphery of the eye of the storm where winds reach their highest speed. { 'ī ,wōl }

Eykmann formula [OPTICS] An empirical formula which relates the molar refraction of a liquid at a given optical frequency to its index of refraction, density, and molecular weight. { 'īk-mən ,fōr-myā-lə }

Eyring equation [PHYS CHEM] An equation, based on statistical mechanics, which gives the specific reaction rate for a chemical reaction in terms of the heat of activation, entropy of activation, the temperature, and various constants. { 'īrīng ī ,kwā-zhən }

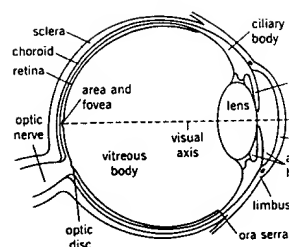
Eyring formula [FL MECH] A formula, based on the Eyring theory of rate processes, which relates shear stress acting on a liquid and the resulting rate of shear. { 'īrīng ,fōr-myā-lə }

Eyring molecular system [FL MECH] Theory to account for liquid properties; assumes that each liquid molecule can move freely within a certain free volume. Also known as Eyring theory. { 'īrīng mō'lek-yā-lər ,sīs-təm }

Eyring theory See Eyring molecular system. { 'īrīng ,thē-ə-rē }

E zone [COMMUN] One of the three zones into which the earth is divided to show the variations of the F₂ layer in respect to longitude when one is making frequency predictions; it roughly covers Asia, Australia, the Philippines, and Japan. { 'ē ,zōn }

EYE



Cross section of human eye.